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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,772	08/17/2006	Michael Mueller	C 2818 PCT/US 2	3882

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EXAMINER	
CHUI, MEI PING	

ART UNIT	PAPER NUMBER
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,772	MUELLER ET AL.	
	Examiner	Art Unit	
	MEI-PING CHUI	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/17/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Action

The Examiner acknowledges receipt of application number 10/589,772 filed on 08/17/2006. Claims 1-6 are presented for examination on the merits for patentability.

DOUBLE PATENTING

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of co-pending U.S. Patent Application No. 10/589,773 in view of Simonnet et al. (U. S. Patent No. 6,689,371).

The instant claims 1-6 are directed to an emulsion comprising **(i)** at least one alkyl and/or alkenyl oligoglycoside carboxylic acid salt of formula (I): $R^1O[G]_pO[(CH_2)_mCOO^-X^+]_n$, **(ii)** an oil component and **(iii)** a mono and/or polyhydric alcohols containing 1 to 4 carbon atoms, wherein the emulsion has a mean particle diameter from 20 to 250 nm, and **(iv)** can further contain a surfactant. In addition, the instant emulsion is incorporated in an article, i.e. wet wipe, or a cosmetic formulation.

The conflicting claims 1-8 of co-pending U.S. Patent Application No. 10/589,773 are directed to an emulsion comprising **(i)** at least one alkyl and/or alkenyl oligoglycoside carboxylic acid salt of formula (I): $R^1O[G]_pO[(CH_2)_mCOO^-X^+]_n$, **(ii)** an oil component and **(iii)** a mono and/or polyhydric alcohols containing 1 to 4 carbon atoms, wherein the emulsion has a mean particle diameter from 5 to 20 nm, and **(iv)** can further contain a surfactant. In addition, the instant emulsion is incorporated in an article, i.e. wet wipe, or a cosmetic formulation.

The instant claims and conflicting claims differ in that the instantly claimed emulsion has a mean particle diameter from 20 to 250 nm, where the conflicting emulsion has a mean particle diameter from 5 to 20 nm.

Simonnet et al. teach a nanoemulsion comprising oils and surfactants (column 2, lines 23-31). Simonnet et al. teach that the oily globules of the nanoemulsion have a number-average size of less than 100 nm, in which the small size globules are transparent and exhibit a novel texture. The small size of globules can also carry active agents more efficiently and can produce a stable emulsion on storage with the ability to retain good transparency and good cosmetic properties (column 1, lines 20-36). Simonnet et al. also teach that the decrease in the size of the globules makes it possible to promote the penetration of the active principles into surface layers, i.e. skin (column 3, lines 3-6).

Simonnet et al. also teach that the surfactant, which is composed of an ester of a fatty acid and fructose or glucose sugar residue, is present in an amount of 0.2 % to 15 % by weight, and the oil phase is present in an amount of 2 % to 40 % by weight. In addition, the nanoemulsion can include additional additive(s) for improving the transparency of the formulation, i.e. ethanol, glycerol, propylene glycerol, which is present in an amount of 5 % to 20 % by weight (column 4, lines 42-51 and column 6, lines 38-63).

Therefore, it would have been obvious to a person of ordinary skilled in the art that the mean particle size (larger or smaller diameter) of an emulsion can be optimized to arrive at the instantly claimed mean particle diameter dependent on the effects of the desirable products, as taught by Simonnet et al.

Therefore, one of ordinary skill in the art, at the time the claimed invention was made, would have readily recognized that claims 1-8 of co-pending U.S. Patent Application No. 10/589,773 and claims 1-6 in the instant application are obvious variant and are not patentability distinct to each other.

Claim Rejections - 35 USC § 112 second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected because it recites the limitation for "the sum of components **(a)** and **(b)** makes up 10-55 % by weight of the composition as a whole" (see claim 1, lines 14-15). However, the claim also recites that the amount of component **(a)** is present from **5 %** to 50 % by weight and the amount of component **(b)** is present from **10 %** to 50 % by weight. Since the sum of minimal amount of each component **(a)** and component **(b)** is at least **15 %**, it is unclear what is the amount of each component **(a)** and component **(b)** that will constitute the sum of 10-14 % by weight, based on the claim recitation.

All dependent claims 2-6 are also rejected because they depend from claim 1 and thus incorporate its limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milstein et al. (WO 99/24538) in view of Simonnet et al. (U. S. Patent No. 6,689,371, which is equivalent to European Patent Application No. 1010413 published on 06/21/2000).

Applicant claims

Applicants claim an emulsion, which has a mean particle diameter of 20 to 250 nm, comprising: (a) 5-50 % by weight of at least one alkyl oligoglycoside carboxylic acid salt of the formula (I): $\mathbf{R^1O[G]_pO[(CH_2)_mCOO^-X^+]_n}$, wherein $\mathbf{R^1}$ = an alkyl group containing 4 to 22 carbon atoms; **G** = a sugar unit containing 5 or 6 carbon atoms; **p** = 1-10; **m** = 1-5; **n** = 1-5; **X** =

an alkali metal; **(ii)** an oil component (10-50 % by weight) and **(iii)** a mono and/or polyhydric alcohols containing 1 to 4 carbon atoms, i.e. ethanol, glycerol, ethylene glycol or propylene glycol (0-15 % by weight), and the emulsion further comprises a surfactant, i.e. a non-ionic, amphoteric or zwitterionic type. In addition, Applicants also claim that the emulsion is incorporated in a cosmetic formulation.

Determination of the scope and content of the prior art
(MPEP 2141.01)

Milstein et al. teach a composition comprising an alkyl polyglycoside ether carboxylate surfactant and auxiliary additives that can be formulated into cosmetic formulation for employing in personal care products (page 10: lines 20-24). Milstein et al. also teach it is known in the relevant art that it is advantageous to use mixtures of surfactants in cleaning compositions when the surfactants can serve different functions, i.e. one serving to improve foamability and another serving to adjust viscosity (page 1: lines 16-18). For example, alkyl polyglycosides are used as non-ionic surfactants with excellent detergent properties and high ecotoxicological compatibility (page 2: lines 5-7).

While most of the existing applications or products use the mixtures of anionic and non-ionic surfactants, it would be more desirable and significantly less costly to employ a single compound which would exhibit the favorable properties of an anionic and non-ionic surfactants at once (page 2: lines 13-17).

Milstein et al. teach that the personal care composition comprising an alkyl polyglycoside ether carboxylate surfactant of the formula (I): $\mathbf{R^1O(R^2O)_b(Z)_aOCH_2COO^-X^+}$, wherein the substituents: $\mathbf{R^1}$ = an alkyl group containing 6-30 carbon atoms; **Z** = a sugar residue having 5 or

6 carbon atoms; **a** = 1-6; **b** = 0, and **X** = an alkali metal ion, in which the preferred alkyl polyglycoside ether carboxylate surfactant of the formula is $\mathbf{R^1O(Z)_aOCH_2COO^-X^+}$ (page 3, lines 1-4; page 4: lines 1-6 and page 7: lines 4-11).

Milstein et al. teach that the alkyl polyglycoside ether carboxylate is present in an amount from 0.1 % to 50 % by weight, based on the weight of the personal care composition (page 11: lines 1-4).

Milstein et al. also teach that the composition can comprise additional auxiliaries and additives, i.e. oily substances and emulsifiers, (page 11, lines 1-3, 12 and 18), wherein the emulsifiers can be non-ionic surfactants, zwitterionic surfactants or ampholytic surfactants (page 11: lines 5-7; page 12, line 11; page14, line 16 and page 15, lines 4-5). In addition, Milstein et al. teach that to improve the flow behavior, the composition can include a hydrotrope, i.e. ethanol or polyol, wherein the polyol can be glycerol, ethylene glycol or propylene glycol (page 20, line 23 and page 21, lines 1-6).

Milstein et al. further teach that the amount of auxiliaries and additives can range from about 1 % to about 50 % by weight, based on the weight of the personal care composition (page 22, lines 17-19).

Ascertainment of the difference between the prior art and the claims (MPEP 2141.02)

Milstein et al. teach a composition comprising an alkyl polyglycoside ether carboxylate and other additives; however, Milstein et al. do not teach a specific amount of the additive, i.e. oil substance and polyhydric alcohol present in the composition. Milstein et al. also do not teach

a specific mean particle size of the composition. However, the deficiencies are cured by the teaching of Simonnet et al.

Simonnet et al. teach a nanoemulsion comprising oils and surfactants (column 2, lines 23-31). Simonnet et al. teach that the oily globules of the nanoemulsion have a number-average size of less than 100 nm, in which the small size of globules is transparent and exhibits a novel texture. The small size of globules can also carry active agents more efficiently and can produce a stable emulsion on storage with the ability to retain good transparency and good cosmetic properties (column 1, lines 20-36). Simonnet et al. also teach that the decrease in the size of the globules makes it possible to promote the penetration of the active principles into surface layers of the skin (column 3, lines 3-6).

Simonnet et al. also teach that the surfactant, which is composed of an ester of a fatty acid and fructose or glucose sugar residue, is present in an amount of 0.2 % to 15 % by weight, and the oil phase is present in an amount of 2 % to 40 % by weight. In addition, the nanoemulsion can include additional additive(s) for improving the transparency of the formulation, i.e. ethanol, glycerol, propylene glycerol, which is present in an amount of 5 % to 20 % by weight (column 4, lines 42-51 and column 6, lines 38-63).

Finding of prima facie obviousness Rational and Motivation (MPEP 2142-2143)

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to combine the teachings of Milstein et al. and Simonnet et al. to arrive at the instantly claimed invention.

One of ordinary skill would have been motivated to choose a suitable quantity of oil component and additive, i.e. polyhydric alcohol, and adjusts their amounts within the desirable concentration range because the amount of said oil component and alcohol present in the composition is merely a judicious selection and routine optimization, which would dependent on the other components present in the composition, as taught by Milstein et al. and Simonnet et al.

One of ordinary skill also would have been motivated to select a suitable mean particle size (larger or smaller diameter) and processes the particle to the desirable size range, which would be dependent on the effects of the desirable products to be made, as taught by Simonnet et al.

From the teaching of the references, it would have been obvious that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milstein et al. (WO 99/24538) in view of Simonnet et al. (U. S. Patent No. 6,689,371), and further in view of Weuthen et al. (U. S. Patent Application Publication No. 2003/0124373).

Applicant claims

Applicants claim an emulsion, which has a mean particle diameter of 20 to 250 nm, comprising: (**a**) 5-50 % by weight of at least one alkyl oligoglycoside carboxylic acid salt of the formula (I): $R^1O[G]_pO[(CH_2)_mCOO^-X^+]_n$, wherein $\mathbf{R^1}$ = an alkyl group containing 4 to 22 carbon

atoms; **G** = a sugar unit containing 5 or 6 carbon atoms; **p** = 1-10; **m** = 1-5; **n** = 1-5; **X** = an alkali metal; (**b**) an oil component (10-50 % by weight) and (**c**) a mono and/or polyhydric alcohols containing 1 to 4 carbon atoms, wherein the emulsion is incorporated in an article, i.e. wet wipe.

Determination of the scope and content of the prior art
(MPEP 2141.01)

The combined teachings of Milstein et al. and Simonnet et al. have been set forth above. Essentially, Milstein et al. teach a composition comprising an alkyl polyglycoside ether carboxylate surfactant and auxiliary additives, i.e. oil substance, mono-alcohol or polyhydric alcohol, in which the composition can be employed in a product.

Simonnet et al. teach the nanoemulsion comprising oils and surfactants (column 2, lines 23-31). Simonnet et al. also teach that the oily globules of the nanoemulsion have a number-average size of less than 100 nm, in which the small size globules are transparent and exhibit a novel texture. The nanoemulsion with such small size can carry active principle efficiently and is stable on storage (column 1, lines 20-36). Simonnet et al. also teach that the decrease in the size of the globules makes it possible to promote the penetration of the active principles into surfaces, i.e. the layers of the skin (column 3, lines 3-6).

Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)

The combined teachings of Milstein et al. and Simonnet et al. do not specifically teach an article, i.e. wet wipe, impregnated with said nanoemulsion. However, the deficiency is cured by the teaching of Weuthen et al.

Weuthen et al. teach an application of wet wipes, which are impregnated with a mixture of surfactants, i.e. alkyl polyglycosides, and oily bodies, as well as auxiliaries and additives, for the technically simple and the cost-effective productions (page 1, [0001] and [0005], and page 1, [0008], [0018], [0027] and [0029]).

Finding of prima facie obviousness Rational and Motivation (MPEP 2142-2143)

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to combine the teachings of Milstein et al. and Simonnet et al., and formulate a storage-stable, cost-effective composition having a very fine divided mean particle size, and further combine the teaching of Weuthen et al., and impregnating said nano-size emulsion into an article, i.e. wet wipe, to arrive at the instant invention.

One of ordinary skill would have been motivated to do this because it is known in the art that a nano-size emulsion can be formulated to retain the good properties, such as transparent, novel texture, storage-stable, good viscosity, and at the same time, it is less costly to produce. Furthermore, the art, namely Weuthen et al., has already established the concept of impregnating an emulsion comprising a mixture of surfactants and auxiliary additives into a wet wipe. Therefore, the Examiner can only conclude that it would be obvious also to impregnate an emulsion into a desired product. The product, i.e. wet wipe, is merely a judicious selection, which would be dependent on the desirable marketing products to be made.

From the teaching of the references, it would have been obvious that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of

ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

No claims are allowed.

Contact Information

Any inquiry concerning this communication from the Examiner should direct to Helen Mei-Ping Chui whose telephone number is 571-272-9078. The examiner can normally be reached on Monday-Thursday (7:30 am – 5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where the application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either PRIVATE PAIR or PUBLIC PAIR. Status information for unpublished applications is available through PRIVATE PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the PRIVATE PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Mina Haghighatian/
Primary Examiner, Art Unit 1616